



THE MINERALOGICAL SOCIETY OF NEW SOUTH WALES INC

Website: www.minsocnsw.org.au

Please address all correspondence to :-
The Secretary, 58 Amazon Road, Seven Hills, NSW 2147

NEWSLETTER JULY 2020

The July Meeting will be held by virtual mode on Friday the 3rd of July at 7.30 pm

According to current information a level of COVID-19 pandemic restrictions will remain in place for at least another month or two. Advice from the Parramatta and Holroyd Lapidary Club management is that they do not expect to be able to open the clubrooms for use before September. Even by then it may be that the number of people allowed into the rooms at any one time will have to be limited.

The Society Meetings including the forthcoming **Annual General Meeting** will therefore continue to be held by virtual mode. Given the good attendance at the virtual meetings so far the Society Committee is confident that the AGM can be conducted adequately and properly. The Zoom program provides the facility for individual attendees to make queries to the Meeting chairperson at any time throughout the proceedings and if necessary a balloting procedure could also be conducted.

Graham Ogle will supervise the master program as before and a link will be sent out to members a few days before the Meeting.

At the July meeting Dr Garry Lowder will give a lecture introducing his autobiographical book:-

‘A Journey through the Elements: Memoirs of a Fortunate Geologist’

Dr Garry Lowder

FORTHCOMING MEETINGS AND PROGRAMS

August 7th : The **Society A.G.M.** will be followed by the Mayne-Walker Memorial Lecture which will be given by Joanna Parr, research scientist of the CSIRO, on ‘**Seafloor Hydrothermal Mineralisation – The Where, Why, What and How of Mineral Formation at Seafloor Hydrothermal Vents**’.

The September 4th program is not yet finalised.

October long weekend: In view of the disappointment in cancelling the Joint Mineralogical Societies Mineralogical Seminar this year the Committee has decided to host a **Virtual Seminar** on the Zoom platform to be run over the two half days, Saturday and Sunday, the 3rd and 4th of October. The virtual Seminar will be held in place of a General Meeting that month, even if all the pandemic restrictions have been lifted.

The November 6th program is not yet finalised.

December 4th: **Society Annual Christmas Social and Swap n' Sell**. If some pandemic restrictions are still in place by December with a limit on the number of people allowed to be in the Lapidary Club rooms at any one time, the Christmas Social may be held on the immediately following Saturday in daylight hours outside the Club, (also depending on the weather).

The ANNUAL GENERAL MEETING Friday 7th of August 2020

Members are hereby duly notified that the Meeting on Friday the 7th of August 2020 will be the Society **Annual General Meeting** which will commence at 7.30 p.m. and will be held by virtual mode.

The A.G.M. will present the President's report for 2019/2020, the Treasurer's report and presentation of the annual financial accounts for 2019/2020 and the election of the Society Committee and office-bearers for 2020/2021. In accordance with the Society Constitution the entire current Committee retires at the commencement of the A.G.M. and all positions are open for nomination and election. Any other business may also be raised and discussed. The minutes of the previous A.G.M. in 2019 were circulated in the September 2019 Newsletter. Copies can be obtained by e-mail or post from the Secretary, George Laking at bglaking@tech2u.com.au or postal address as following.

Nomination forms for election to the 2020/2021 Committee are being circulated with this Newsletter. Nominations may be sent to the Secretary electronically and members sending forms should ask for a confirmation that they have been received. According to the Society Constitution nominations should be received seven days before the commencement of the A.G.M. If insufficient nominations are received before the commencement of the A.G.M. they can be accepted at the Meeting.

Only financial and Honorary Life members of the Society are eligible for nomination or allowed to participate in any voting. Any members who feel able to serve on the Committee are urged to discuss this with any of the current Committee members and if they wish to be nominated should arrange for another member to propose them and provide the completed and signed form. A member can be nominated for but cannot hold more than one position.

Members sending hard copy nomination forms by post are reminded to address all correspondence to :-

The Secretary, Mineralogical Society of NSW Inc,
58 Amazon Road, Seven Hills, NSW 2147

REQUEST FOR ASSISTANCE

Paul Meszaros

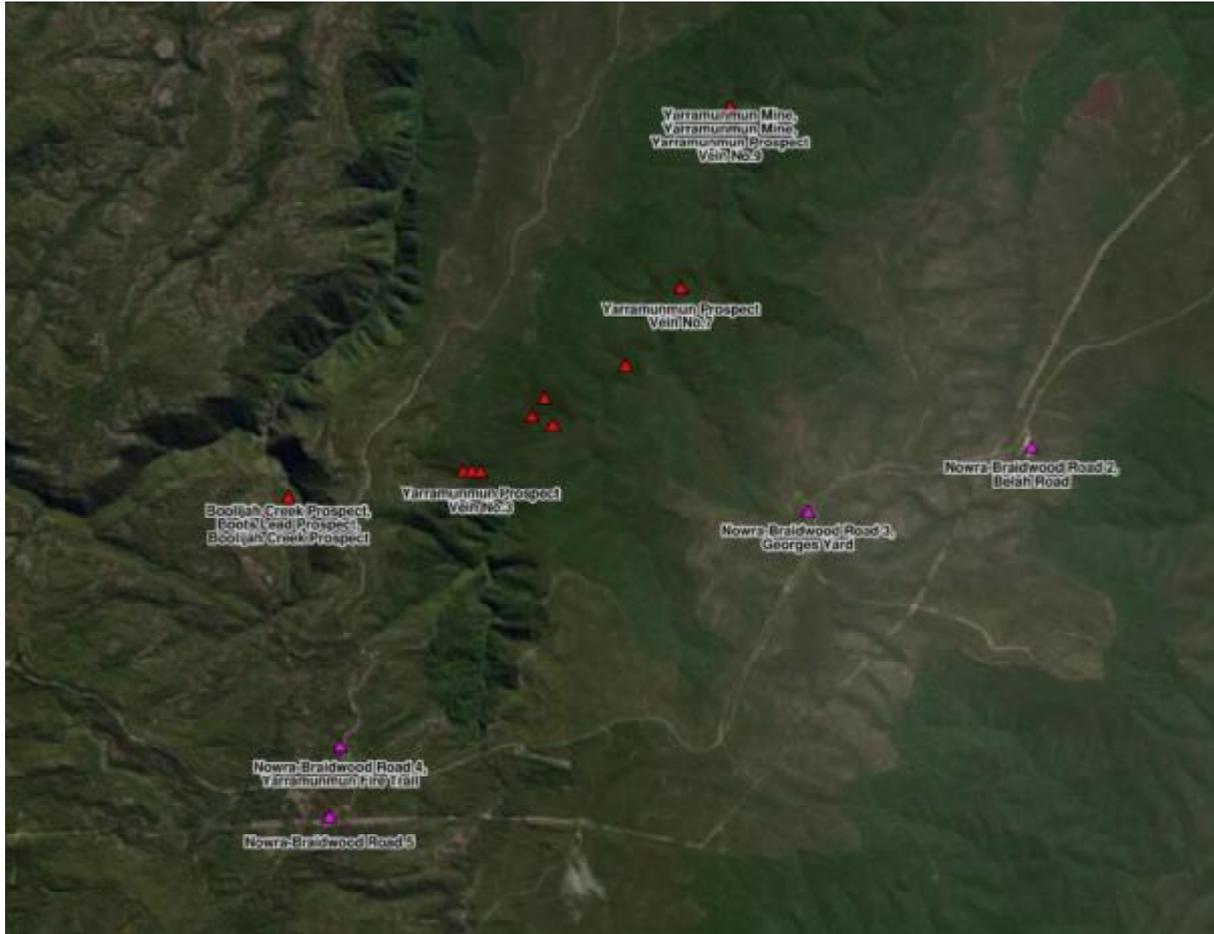
Request for Assistance with a Mineral Systems Research Project, Geological Survey of NSW (GSNSW)

I know many members of Min Soc are keen collectors of minerals from "obscure" localities and I am hoping that one or more of you will have examples of ores from the Yarramunmun Mine and associated prospects that are located in the Shoalhaven hinterland, south of Yalwal (Morton National Park). The GSNSW Mineral Systems team, led by Dr Phil Blevin, is currently trying to find galena and sulphide-bearing ore specimens from these deposits in order to extract a few tiny bits of galena to

provide Pb-Pb model ages using precision lead isotopes. This work is part of a compilation of the probable Carboniferous age mineral systems that lie under the Sydney Basin.

There are various recognised mines, veins and prospects in the vicinity that are of interest in this study; please see accompanying image for more details. Various geographic names have been attributed to these occurrences; Yarramunmun, Tianjara or Tianjara Creek and Boolijah or Boolijah Creek.

We are hoping that someone might have an historic specimen(s) from these now very remote and inaccessible localities that lie 13km beyond locked gates on fire trails.



If you are able to assist us in this interesting research, please contact Paul Meszaros, (Curator, Economic Rock and Mineral Collection), to discuss your contribution further:

paul.meszaros@planning.nsw.gov.au or 4777 7806 or 0408 484 776

WELCOME

Welcome to new member Sue Thomas of Cookamidgera near Parkes.

The SOCIETY COMMITTEE

PRESIDENT:	Dieter Mylius	Mobile phone 0412 516 193
	E-mail:	dieterm@internode.on.net
VICE-PRESIDENT:	John Chapman	Tel: (02) 9808 3481
	E-mail:	chapmanjr@optusnet.com.au
SECRETARY:	George Laking	Tel: (02) 9636 7145
	E-mail:	bglaking@tech2u.com.au
TREASURER:	Graham Ogle	Tel: (02) 9869 1416
	E-mail:	quartzandsirius@hotmail.com
COMMITTEE MEMBERS:	Peter Beddow	Tel: (02) 8810 8446
	David Colchester	Tel: (02) 9449 3862
	Geoff Parsons	Tel: (02) 9548 3289
	Simon Tanner	
	Edward Zbik	Mobile phone 0401 538 480
	E-mail	edward.zbik@bigpond.com

Field Trip to Orange - Dates 17/18/19 July 2020

Manildra locality – **Limit of 10** – **Open to Financial Members Only**
 Field Trip Leader will be Denis O'Brien. - All sites are on private property
 Attendees will have to follow the Society's Covid-19 Safety Plan.
 A cost of \$20 applies per attendee.
 To register: Contact Edward Zbik at edward.zbik@bigpond.com
 or 0401 538 480 by 14th July 2020.

CERTIFICATION to enter Commercial Sites

The Society follows a protocol of certification for members who attend commercial mines and quarries.
 This process involves answering sixty multi choice questions based on the
 Society's Safety Operations Procedures (SOP)
 and its Safety Works Methods Statement (SWMS).
 Upon completing the questionnaire,
 a Certificate of Compliance (CoC) will be issued
 which is valid for a period of three (3) years.
 Members whose Certificate has expired can recertify for another CoC
 by answering 30 multi choice questions including two exercises.
 Members who complete their questionnaires in 2020
 will have their certification extended until the end of December in 2024.
 Members who do not go on field trips
 may also complete the questionnaire and gain a CoC.

To apply for Certification or re-Certification,
 contact Edward Zbik at edward.zbik@bigpond.com
 or 0401 538 480.

Edward Zbik has a new e-mail: edward.zbik@bigpond.com
 Add this to your address book to receive e-mails about field trips.

The MAY MEETING

The May General Meeting of the Society was held by virtual mode and received a good attendance from members. The Meeting was chaired by Dieter Mylius with Graham Ogle supervising the Zoom operating program. Whilst the technicalities of joining a virtual meeting were still a problem for some members whose computers did not transmit their images to the joint shared screen it was apparent that they could see and hear the main speakers.

There were a few reports made. Paul Moxon had been collecting trilobites in the Forbes and Parkes area investigating Silurian and Ordovician shales and Steve Sorrell had been looking for alanites and titanites in granites at Mt Cole which is about forty minutes from Ballarat. Dieter Mylius was in the process of sorting through a large amount of specimen material originally from sites in the Cloncurry area 'rescued' from storage at Western Sydney University when it was scheduled for being discarded. He also reported that the Society had just become the custodians of a large micro-mount collection put together by Col Price, an early collector and contributor of articles in the 1970s for the Australian Gem & Crafts magazine. The intention was to keep the collection intact and digitally catalogue the specimens which would be made available to members with microscopes to examine on a monthly basis.

Graham Ogle advised that there would not be a Micro-mount Group meeting this month but one would be held on the second Saturday in July. The meeting would probably be by virtual mode, or even 'live' for a few people, depending on restrictions.

John Chapman introduced the speaker for the evening. He suggested that not many members would know a great deal about salt lakes, brines and the minerals that can be extracted from them but he had been lucky to meet Murray Brooker who was an expert in the field and who had agreed to present a lecture to the Society. John Chapman had met the speaker at a meeting of the Lane Cove Creative Photography Group when Murray had just joined as a new member.

Murray Brooker is a very experienced hydro-geologist and specialist in the exploration and the development of salt lake mineral extraction and hard rock pegmatite projects with extensive experience as a lithium, potash, borate and brine consultant throughout the Americas and Australia. He had set up a consultancy group, **Hydrominex Geoscience**, to explore and develop extraction projects globally. His lecture was thoroughly illustrated by a Power Point projection which the speaker has provided to the Society for adding to the Website and for the following summary.

Salt Lake Mineral Exploration

Murray Brooker

Murray Brooker briefly described his early years as a geologist working in country New South Wales, living in Parkes and working along the Lachlan Fold Belt looking for gold. He then moved to South America to work there for many years gradually picking up Spanish being impressed with the different culture and concentrating his work on salt lakes throughout the continent. Salt lakes in South America were generally at high altitudes and in extreme and challenging environments such as the Bolivian Altiplano at 4,000 meters, in Patagonia in southern Argentina and the Atacama Desert in Chile. The climate where salt lakes were located could be frigidly cold with strong winds but with intense solar evaporation leading to the risk of sunburn to workers.

Murray Brooker would be speaking mainly about his work in South America but would also refer to salt lakes in Australia which were nearer to sea level but also with extreme temperature variations throughout the year. The products from South American salt lakes were generally of substantial and important significance for the electrification and fertiliser industries.

Salt lakes & their mineral wealth:

Salt lakes are an important source of lithium (for batteries), potassium (for fertiliser) and boron (as flux, for fibre glass, flame retardants etc). Lakes include permanent water bodies i.e. the Dead Sea, the Great Salt Lake (USA), but most commonly are seasonally flooded dry lakes in the Andes of Argentina, Chile, Bolivia; Nevada and Utah USA; the Qinghai Basin in NW China; and in Central, South and Western Australia. Salt lakes are referred to as Playas, Salars, Salt Lakes, and Dry lakes etc

Lithium supply and demand:

Key demand drivers are: Electronic devices; Electric cars; Electricity storage – i.e. Tesla Powerwall battery storage, Glass production and other industrial applications. The use of battery grade lithium in portable electronic devices has grown by ~20% annually since 2000. Borate is often closely associated with lithium deposits and is also an important product.

Potash uses:

Key demand driver = agriculture. Essential nutrient; Applied as part of potash or mixed fertilisers; KCl – Muriate of Potash (MOP) most common ~90% of market. Used for grains and major crops;

K_2SO_4 – Potassium sulphate, (Sulphate of Potash, SOP), is important for sensitive crops – citrus, stone fruit, high value crops; SOP demand is growing strongly; Australian salt lakes can produce SOP. South American salt lakes can produce MOP or SOP depending on chemistry.

Brine deposit key ingredients:

Lithium source: (from acid volcanic rocks - Miocene & younger & volcanic glasses); Hot springs associated with volcanos or leaching of volcanic rocks. Associated boron and potassium. Chemical ratios important for brine processing – ideally with Low Mg/Li, Ca/Li and SO_4/Li ratios.

Potassium source: – weathering of micas and feldspars. Deposits more widespread than lithium, as sources more varied.

Tectonic/topographic control:

Andes - Internal drainage, thick sediments in tectonic depressions; Central Australia - Lower topography, potash deposits in broad depressions and paleo channels.

Arid climate:

Evaporation >> seasonal rainfall, evaporative concentration generating hypersaline brines.

Rainfall and evaporation:

Major rainfall deficit necessary, overall rainfall <~250 mm;

Uplift of the Puna Plateau on the border of Argentina, Bolivia & Chile created a rain shadow and arid to hyper-arid environment. This area receives summer storms from the Brazilian jungle. Drier to the SW into Chile, the Atacama Desert/Salar de Atacama.

Central Australian lakes - annual rainfall from major storms moving inland from NW Australian coast. Surface and groundwater inflows to salt lakes dilute (i.e. 3 mg/l Li). Inflows evaporate around the margins of the lakes, with increasing concentrations – 600 mg/l Li typical, 6,000 + mg/l K.

Murray Brooker stressed that the economically-significant minerals to be obtained from salt lakes depended on what salts were being washed into them by seasonal rain and water inflow. These would more commonly be common salt, sodium chloride, and gypsum, calcium sulphate. As a lake dried up there would a chain of reactions as the less and less soluble substances precipitated out one by one. Conveniently since lithium salts were particularly soluble they would be the last to precipitate from a solution. Accordingly lithium-rich fluid could be pumped from the remaining liquid in a salt lake or pumped from beneath the dried surface.

Referring to a map of an area of about 1,000 klm by 200 klm of central-west South America and parts of the countries, Chile, Bolivia and Argentina, the speaker stressed that the several factors needed to produce lithium in that area were that rains were draining lithium-containing rocks into basins with no access, or exit, to the sea. Accordingly lakes would periodically flood but given the other factors of low rainfall and high evaporation the lakes would dry out and become an important source of economic salts.

As an illustration of the drainage and salt concentration process the speaker referred to an image of a typical salt lake in South America on the border of Chile and Argentina. The volcano at the top of the image was about 6,000 meters high and its rocks probably one of the sources of the lithium in the lake. In the image the salts in the river draining into the lake become progressively more concentrated with the carbonates and then sulphates precipitating out in the marginal zone, then the brine gets more concentrated precipitating out the halite and finally concentrating the lithium in the nucleus area.



By comparison an image of a salt lake in Australia on the border of W.A. and the Northern Territory about a hundred klm west of Alice Springs was projected and described showing similar features of gypsum 'islands' accumulated at the inflow area. Salt lakes in Australia were not fed with water draining from lithium-containing source rocks but since potassium is more wide-spread in feldspars and micas Australian lakes are sources of potash.

The most common mineral in salt lake brine is common salt, sodium chloride, and gypsum, calcium sulphate, and there is certainly substantial recovery and production of those minerals. The speaker also showed several images of large-scale common salt and gypsum production.

Salt layers – at surface or depth



Salt crusts vary from zero thickness to hundreds of metres thick, reflecting climatic conditions, hydrology and the salt balance in each individual basin.



Traditional salt lake activity – harvesting salt to accompany Argentine beef!

Common Salt production in South America. Brine pumped into troughs to dry and be scraped out.

Borates and other evaporite minerals were referred to. Most are of economic significance and images of some of these were displayed. Advice that the speaker provided is that borate minerals tended to hydrate and lose their original crystal structure.

Borate minerals – a diversity



OTHER EVAPORITES – SOME ECONOMIC



Carnallite: $\text{MgCl}_2 \cdot 2\text{KCl} \cdot 6\text{H}_2\text{O}$
Wartburg Germany

Silvite: KCl
Carlsbad New Mexico



Sylvinit
 $\text{KCl} \cdot \text{NaCl}$, Barcelona Spain



Bischofite $\text{MgCl}_2 \cdot 6\text{H}_2\text{O}$
Antofagasta Chile



Glauberite $\text{CaSO}_4 \cdot \text{Na}_2\text{SO}_4$
California



Mirabilite $\text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O}$
California

Murray Brooker next described the drilling and pumping work with the aid of a few images. Drilling equipment and the transport vehicles have to be provided with a raised ramp to move about or be set up on the lake surface since this would probably not support heavy equipment and vehicles would be likely to sink up to their axles. Drilling would be by diamond or sonic equipment the latter being more expensive but would drill down by vibrating the drill bit into the ground. The brine would then be pumped into troughs lined with an expensive very thick black plastic to continue drying and concentrating further before being removed.



Diamond



Sonic

At the end of his lecture Murray Brooker answered a number of questions from members. One query and answer was that in spite of Australia not having much lithium in salt lake deposits the country

was still well supplied with the element which in the past has been derived from pegmatites. The World's largest lithium-producing mine was actually Greenbush in West Australia which has been operating for over a hundred years. It was originally a tin mine, later mined for tantalum and now lithium.

Otherwise Murray Brooker expected that battery technology would continue advancing with other elements such as vanadium becoming significant in addition to lithium. With no more questions he finally signed off and wished everyone a good weekend.

The Meeting continued for some minutes with a discussion being held between members, fairly easily conducted through the Zoom program. The attendance at the meeting by regional members was noted as encouraging although some members were still finding technical difficulties with connecting in to the program.

John Chapman reported that before the COVID restrictions were imposed he had been making inquiries about holding a field trip to the Manuka mine as part of the now-postponed Seminar in October. The Manuka management had tentatively agreed to allow a visit which hopefully they would hold over to the following year.

THE MINERALOGICAL SOCIETY OF N.S.W. INC

NOMINATION FORM FOR ELECTION OF OFFICE-BEARERS

AND COMMITTEE MEMBERS FOR 2020/2021

POSITION	Name of Nominee (Please print)	Signature of Nominee
OFFICE-BEARERS		
PRESIDENT
VICE-PRESIDENT
SECRETARY
TREASURER
COMMITTEE MEMBERS		
MEMBER

PROPOSER:

Name (Please print):

Signature:

Date:

COVID-19 Safety Plan 2020 06 E

Field Trips are for Members Only,

We are encouraging members to install the [COVIDsafe app](#)

In these unusual times we are obliged to make special arrangements for your protection and the protection of all others on the field trip.

We ask for your understanding and help and wish you lots of fun.

Basic rules

- 1) Members ~~and guests~~ who
 - a) have tested positive at any time for the new coronavirus that causes COVID-19 illness, whether they have symptoms or not.
 - b) have been or have been in contact with a person infected with SARS-CoV-2 if it has not been 14 days since the last contact, or
 - c) have symptoms of a respiratory infection or elevated temperature,

If you are in any of the above groups, you must not participate in any Field Trip.

- 2) All members ~~and guests~~ must have registered with the field trip leader **48 hours** prior commencement of the field trip to be compliant.
- 3) Please always keep the specified safety distance of 1.5 m or more.
- 4) Please avoid shaking hands and other physical contact.
- 5) Avoid all forms of physical contact.
- 6) Carry at least 4 litres per person in your car for frequent handwashing.
- 7) Have your own medical kit in your car, only to be used by driver and passengers of the car.
- 8) You should, as much as possible, avoid handling or close inspection of any mineral, specimen, artefact, or any other object collected by another member.
- 9) The COVID-19 Safety plan together with the names, including mobile, e-mail and car registration may be given to a third party only if **required to conduct the field trip on** private lands, commercial mines or quarries, mining or exploration lease or restaurant.
- 10) Members will comply with any other COVID-19 Safety Plans of any organisation requesting compliance.
- 11) If you sight a forgetful member, please remind them gently.
- 12) **Arrival and departure**
 - a) The field trips may have limits less than the number specified and change at short notice. Attendance may be given to the order of registration .
 - b) The current number of participants is limited to 20 in any one group.
 - c) Refer to Paperless field trip sign-in on page 2.
 - d) Before you leave a site, SMS the leader you are leaving, and include the names of people the driver is taking out.
 - e) Any person not registered who arrives at the site will be told to leave immediately.

13) Loan Tools

- a) Avoid sharing tools.
- b) Tools should not be loaned to any other member unless they are wiped with disinfectant first.

14) On the heap

- a) The basic distance rules apply.
- b) In **closely worked areas**, less than 6m between members, where practical, each member is to peg out an area,
 - i) That is a 3x3m square and at least 2.0m or more between member boundaries.
 - ii) An area can be made by joining a 12/14m rope and square it out with 4 pegs.
 - iii) You can place a knot a meter apart on the rope.

- c) Wear gloves at all times where possible.
- d) Any specimen being passed to be examined by another member should be made with care, disinfecting hands with sanitiser afterwards. If there is prolonged contact, wear masks.

15) In any seating area

- a) Social distancing applies.

16) Toilet area

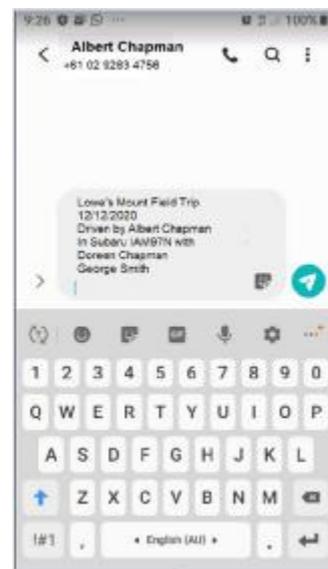
- a) Only one person at a time is to use any accessible public toilet.
- b) Wipe down or disinfect the toilet seats
- c) Wash hands after using the toilet
- d) Bush toilet rules apply, dig a hole, bury it including paper.
Respect others.

17) Socialising and Dinner

- a) Any bookings should be less than 10 per group.

18) PAPERLESS FIELD TRIP SIGN ON.

- a) Send an SMS sign on to the Field Trip Leader with your name, name of passengers and car registration number.
- b) On leaving the site or end of last day, send an SMS to the Field Trip leader that you are leaving with your name, name of passengers and car registration number.
- c) If you extend your time at a site after the main body has left, SMS the Field Trip leader with your name, name of passengers and car registration number, when leaving the site.



Requirements to be compliant,

All the following requirements must be **Yes** for items 1-9 below before registering and at the site.

Item 10 is required if the Field Trip is into a State Forest or Commercial Forest.

Requirement for compliance	Before you register		At the site	
	Yes(tick)	No(tick)	Yes(tick)	No(tick)
1. Be a current Financial Member of the Society				
2. Have replaceable face masks and gloves				
3. Registered your name				
4. Register your mobile				
5. Register your e-mail				
6. Register your vehicle registration or registration of vehicle you will be travelling in.				
7. First Aid Kit (family/car size) in car				
8. Alcoholic hand wash (80% alcohol) in car				
9. Carry 10 litres of water for personal consumption in car				
10. Have a current State Forest Fossicking licence				
11. No history of a positive test for COVID-19 or has been in contact with someone with the virus or has any other respiratory infection.				
State if you are the driver or passenger.				
If carrying passengers, they are to be named.				

As at 13st June 2020, Conditions may change and any aspect in this document may change to be restrictive or open.

Refer: <https://www.nsw.gov.au/COVID-19/what-you-can-and-cant-do-under-rules>

Check Business Safety Plan conditions for “Camping Grounds and Caravan Parks” and “Agriculture”.

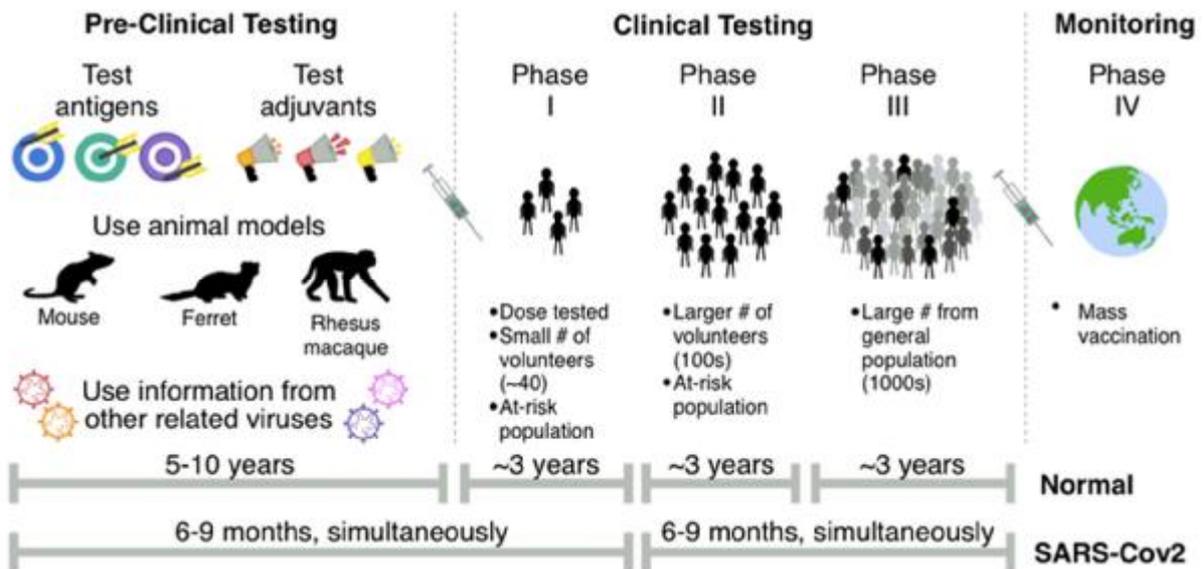
Coronavirus (COVID-19) advice for Seniors.

This is especially important for seniors over 70 years old or over 65 years old with a chronic illness. These groups have a greater risk of serious illness if they contract COVID-19. I urge you to exercise caution and read the Commonwealth Government’s guidelines on this

Link: <https://www.health.gov.au/news/health-alerts/novel-coronavirus-2019-ncov-health-alert/advice-for-people-at-risk-of-coronavirus-COVID-19/coronavirus-COVID-19-advice-for-older-people>

Moving at an unprecedented speed

Vaccine development is usually a long process involving both pre-clinical and clinical testing. For example, it took more than 15 years for Professor Ian Frazer and his team to develop and license the human papillomavirus (HPV) vaccine.



Researchers are moving through the vaccine pipeline quickly to develop a vaccine for COVID-19. In stark contrast, experts have estimated a vaccine for SARS-Cov-2 may take 12-18 months. A huge international infrastructure is mobilising to develop a vaccine at an unprecedented speed.

However, safety will always be paramount with vaccines, so researchers are accelerating but not skipping clinical trials. Now we eagerly await the initial results.

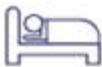
Authors	
Kylie Quinn Vice-Chancellor's Research Fellow, School of Health and Biomedical Sciences, RMIT University	Damian Purcell Professor of virology and theme leader for viral infectious diseases, The Peter Doherty Institute for Infection and Immunity



Australian Government

Coronavirus
(COVID-19)

COVID-19: IDENTIFYING THE SYMPTOMS

SYMPTOMS	COVID-19	COLD	FLU
	Symptoms range from mild to severe	Gradual onset of symptoms	Abrupt onset of symptoms
Fever 	Common	Rare	Common
Cough 	Common	Common	Common
Sore Throat 	Sometimes	Common	Common
Shortness of Breath 	Sometimes	No	No
Fatigue 	Sometimes	Sometimes	Common
Aches & Pains 	Sometimes	No	Common
Headaches 	Sometimes	Common	Common
Runny or Stuffy Nose 	Sometimes	Common	Sometimes
Diarrhea 	Rare	No	Sometimes, especially for children
Sneezing 	No	Common	No

Adapted from material produced by WHO, Centers for Disease Control and Prevention.

It is very difficult to distinguish between the symptoms of COVID-19, influenza and a cold. If you have any infectious or respiratory symptoms (such as a sore throat, headache, fever, shortness of breath, muscle aches, cough or runny nose) don't go to work. You need to self-isolate and to be assessed by a medical professional. You may need testing for COVID-19. You must not return to work until cleared by a medical professional. You need to ensure that the people you care for are protected and safe.

TOGETHER WE CAN HELP STOP THE SPREAD AND STAY HEALTHY

For more information about **Coronavirus (COVID-19)** visit [health.gov.au](https://www.health.gov.au)